

REMARKS

Reconsideration of the application is respectfully requested, in view of the following remarks.

Various processes have been disclosed in the art to improve the quality of vegetables which have been stored frozen. Page 6 of the specification points out that the present invention is directed to a process which yields a significant improvement in the cooked texture of vegetables compared to vegetables subjected to conventional commercial freezing methods.

The invention comprises subjecting a vegetable or part thereof to a firming treatment which may be immersion in a calcium salt solution or heating in the range of about 50 to about 70°C, or both, and under-cooling to a core temperature of less than or equal to -5°C, and reducing the temperature to less than or equal to -18°C. With respect to the effect achieved by the invention, the Office's attention is directed to the present examples.

Under-cooling is discussed at page 3 of the specification. In the second full paragraph, it is stated that under-cooling refers to the reduction of the temperature of the vegetable or part thereof to a temperature below the freezing point (i.e., temperature at which freezing is possible) without the formation of ice crystals occurring. Therefore, "under-cooling" does not refer merely to lowering the temperature, but to lowering the temperature to below the freezing point without the formation of ice crystals. Also, it should be appreciated that the claims recite under-cooling to a core temperature. The core is discussed in the specification e.g., on page 3.

The specification indicates in the paragraph bridging pages 9 and 10 of the specification that conventional wisdom accepts that the quicker the temperature drops during freezing, the more rapidly freezing occurs and the more favorable the vegetable properties achieved and that it is surprising to find that where the rate of cooling is slowed to achieve a defined level of under-cooling within the vegetable core, initiation of freezing can be induced throughout a product almost instantaneously.

In the action dated 7/19/06, the Office states on page 5 that applicants have not claimed any cellular or conditional result which must be achieved at -5 degrees. Applicants respectfully disagree. As pointed out above, under-cooling is stated to refer to reduction to a temperature below the freezing point...without the formation of ice crystals. So, again, under-cooling is not just a reduction in temperature below the freezing point. It may be useful to note that sometimes the term "supercooling" is used to describe the phenomenon described as under-cooling herein.

The Office points to no teaching by Bourne US Patent No. 5,607,712 that under-cooling should be used nor to anything which suggests that Bourne inherently (inevitably) utilize under-cooling. Indeed, in column 4, Bourne refers to freezing "quickly." Also, he mentions that most freezers receive the prepared vegetables in one end and, after a suitable holding time, usually 15 to 30 minutes, discharging frozen vegetables from the other end. Given the lack of any reasoning why Bourne inevitably use under-cooling, it is respectfully requested that the section 102 rejection be withdrawn. And, in view of the lack of any teaching by Bourne that under-cooling should be used, it is requested that the Section 103 rejection be withdrawn as well.

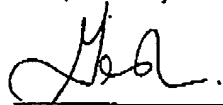
Backinger and Frane US Patent No. 3,136,642 (listed as Frane et al. on Form 1449 and in the Office Actions) is similarly cited by the Office for teaching cooling to -18oC. Again the Office points to no teaching of under-cooling the core to the recited temperatures.

Frane et al. talk of subjecting raw plant material to soaking in a calcium salt solution to an extent sufficient "to withstand the stresses of quick-freezing and thawing..." (paragraph beginning bottom of col. 1). The [freezing] operation is said to take place "in a matter of seconds" (col. 2, lines 7-8). Quick freezing, preferably in 20-60 seconds, is mentioned in col. 2, lines 28-30. In col. 3, quick freezing is again discussed and it is said that the freezing time should never exceed 3 minutes. Therefore, it is unclear upon what basis it could be concluded that Frane et al. inherently, inevitably achieve the presently recited under-cooling or that they teach under-cooling.

With respect to the Bengtsson et al. reference, the Office again points to no teaching of under-cooling to a temperature of -50C or below. In addition, as mentioned previously, applicants have been unable to identify a reference on Forms PTO-1449 or 892 with that name, and it is respectfully requested that the Office clarify by supplying the document type and number.

In view of the foregoing, it is respectfully requested that the application be allowed.

Respectfully submitted,



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